

Academy

California Academy of Sciences – Golden Gate Park

June/July 1999

**Academy Partners
with UCSC**

**Neanderthals Arrive
at the Academy**

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To explore and explain the natural world

STEINHART AQUARIUM • MORRISON PLANETARIUM • NATURAL HISTORY MUSEUM

Executive Director's Message

With the school year winding down and summer months fast approaching, I'd like to take this opportunity to give an education "progress report."

In this 1998-99 school year, the Academy served almost 115,000 Bay Area school children—22,000 of them from San Francisco—and their teachers. If you happened to visit us during the month of May, you might have experienced what we at the Academy fondly call May Madness: a time when the halls of our institution are completely full of school children. We began to experience the May Madness sensation in February as the winter and early spring months were very busy for us. With the diversity and sheer volume of school children we welcomed, we couldn't be happier.

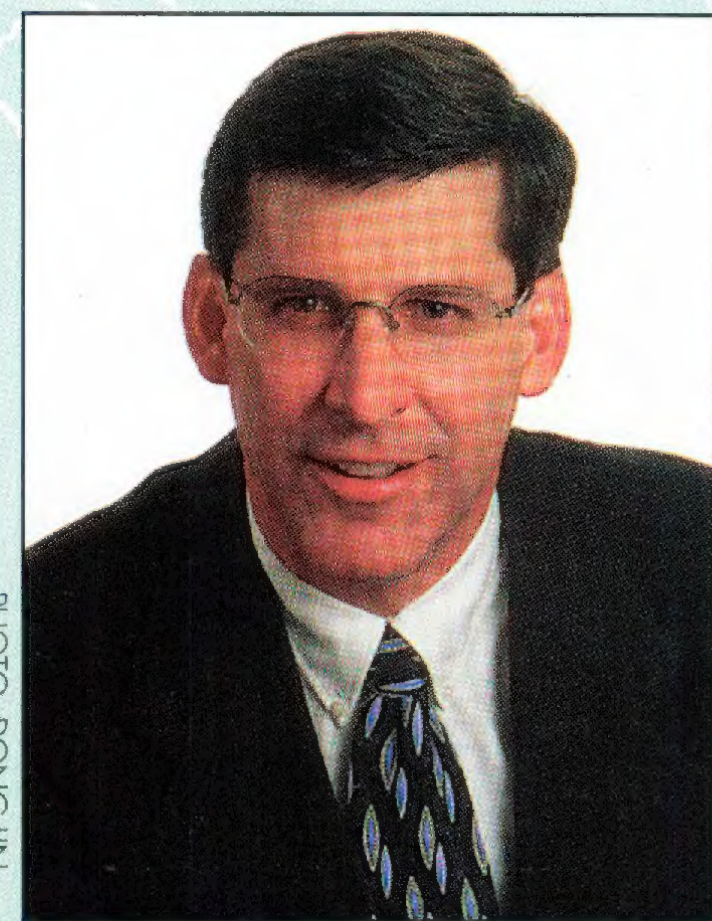


PHOTO: DONG LIN

Dr. Patrick Kociolek

Just because "school's out" and it's summer, it doesn't mean we stop serving groups of children. Many young people come to the Academy through summer camp and summer programs. Attendance by these groups has skyrocketed over the past five years, and we expect this summer will be no different.

And our formal programs will also be busy this summer. Camp Academy, presented through Junior Academy, offers a range of courses for young people of all ages. Almost 300 young people are expected to enjoy science sessions through Camp Academy this summer. The offerings include our Junior Explorers program for six to eight year olds, a Golden Gate Park program for nine to twelve year olds, a three day Pepperwood Program for ten to twelve year olds who will hike, study orienteering and astronomy, and a Sierra Ecology backpack trip in the South Lake Tahoe mountains for 12 to 15 year olds. And I'm pleased to report that many young people will participate through the San Francisco Recreation and Park Department's Latch Key Program and are able to attend Camp Academy programs thanks to corporate funded scholarships.

Finally, I want to welcome the University of California at Santa Cruz to the Academy family. On April 12th, UCSC Chancellor M.R.C. Greenwood and I signed a Memorandum of Understanding that formalizes our mutual commitments to increasing our institutions' study of biological research. The Academy and UCSC will collaborate on research projects, biological illustration and science writing programs. We hope to soon offer UCSC students summer internships and scholarships to work at the Academy in these areas.

Whether it is through informal learning by school and summer groups, more formal programs with our docents, the Camp Academy programs or university-level collaborations, our education lineup is vigorous even though it's summer. And these summer programs support the Academy's mission, "To explore and explain the natural world."

Have a great summer.

"The Future Is Me!"

On Thursday, April 22, daughters, granddaughters, nieces, and neighbors got a very personal look at life behind the scenes at the Academy. As part of the seventh annual Take Our Daughters To Work Day, ten girls, ages 7 to 14, spent an exciting day of exploration at the Academy. Discoveries were made not only about the wonders of science, but also about the work that is done at a large museum and research institution.



PHOTO: DONG LIN

Herpetology Curatorial Assistant Lindsay Henwood with daughters of Academy staff.

Created by the Ms. Foundation for Women, Take Our Daughters To Work Day is dedicated to celebrating girls' ideas and dreams. This year's theme was "The Future is Me!" For those lucky enough to have a family member or friend who works at the Academy, the day produced new ideas about future careers in science and for one participant, reinforced a steadfast aspiration to be an astronomer. And while a five year old volunteered that she would like to be a herpetologist, others gave a cool reception to the thought of working with "dead ones."

Highlights of the day included a tour of the aquarium with Aquarium Pathologist Pat Morales. "I liked above where the fish swam around. One Koi fish kinda sucked on my knuckle 'cause it thought it was food," said Maddie Cargas, age 11. Pat also introduced the girls to Pilgrim, our penguin born on Thanksgiving and Bo, one of the Academy's resident snakes. The group also got a close-up look at specimens in the Herpetology Department with the help of Curatorial Assistant Lindsay Henwood and finished their tour with a stop at the Touch Tidepool. Each girl received an Academy T-shirt to remember her day "at work."

Many thanks to Maureen Bourbin of Human Resources for organizing activities and to all Academy staff who devoted their time to this special group.

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Missing Links—Alive! Programs

Get primitive at the Academy and experience human evolution through hands-on activities, demonstrations, storytelling, and much more. Learn how to weave plant fibers or make your very own cave painting with techniques used by our ancestors more than 20,000 years ago. Primitive technology experts will demonstrate flint knapping and fire-making.

The demonstrations and hands-on programs will be scheduled on selected weekdays and weekends. Please check our website or call 415-750-7145 for updated information.

Discovery Lecture Series

with Dr. Nina Jablonski
June 7, June 14, June 21, and June 28

Missing Links—Alive! Lecture Series

The Hunting Apes: Meat Eating and Human Origins
with Dr. Craig Stanford
Wednesday, June 16

Changing Views of Human Evolution
with Adrienne Zihlman
Thursday, August 5

2.5 Million Years of Human Evolution
with Dr. Alan Walker
Thursday, August 19

Details are listed in the LECTURES Section of *Academy*.

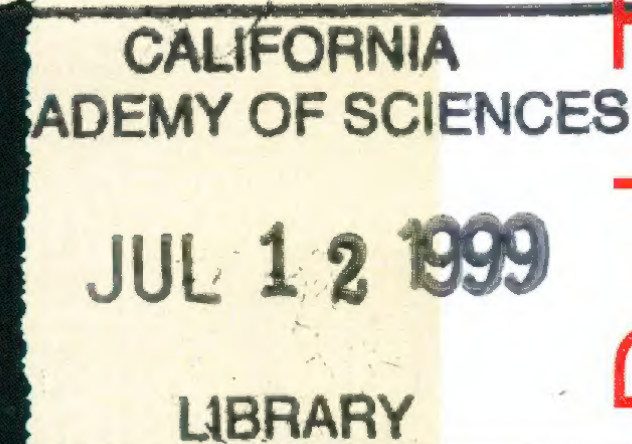
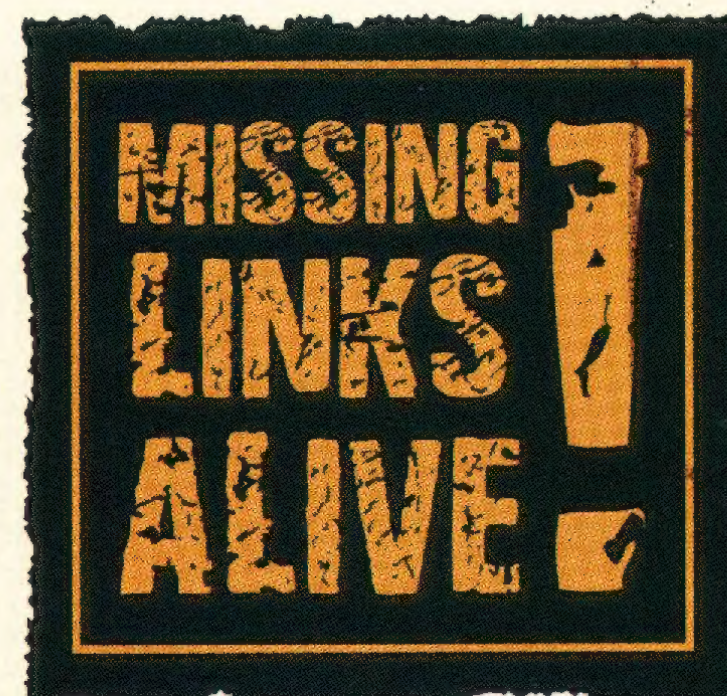
Coming this Fall



One Continent...Many Worlds

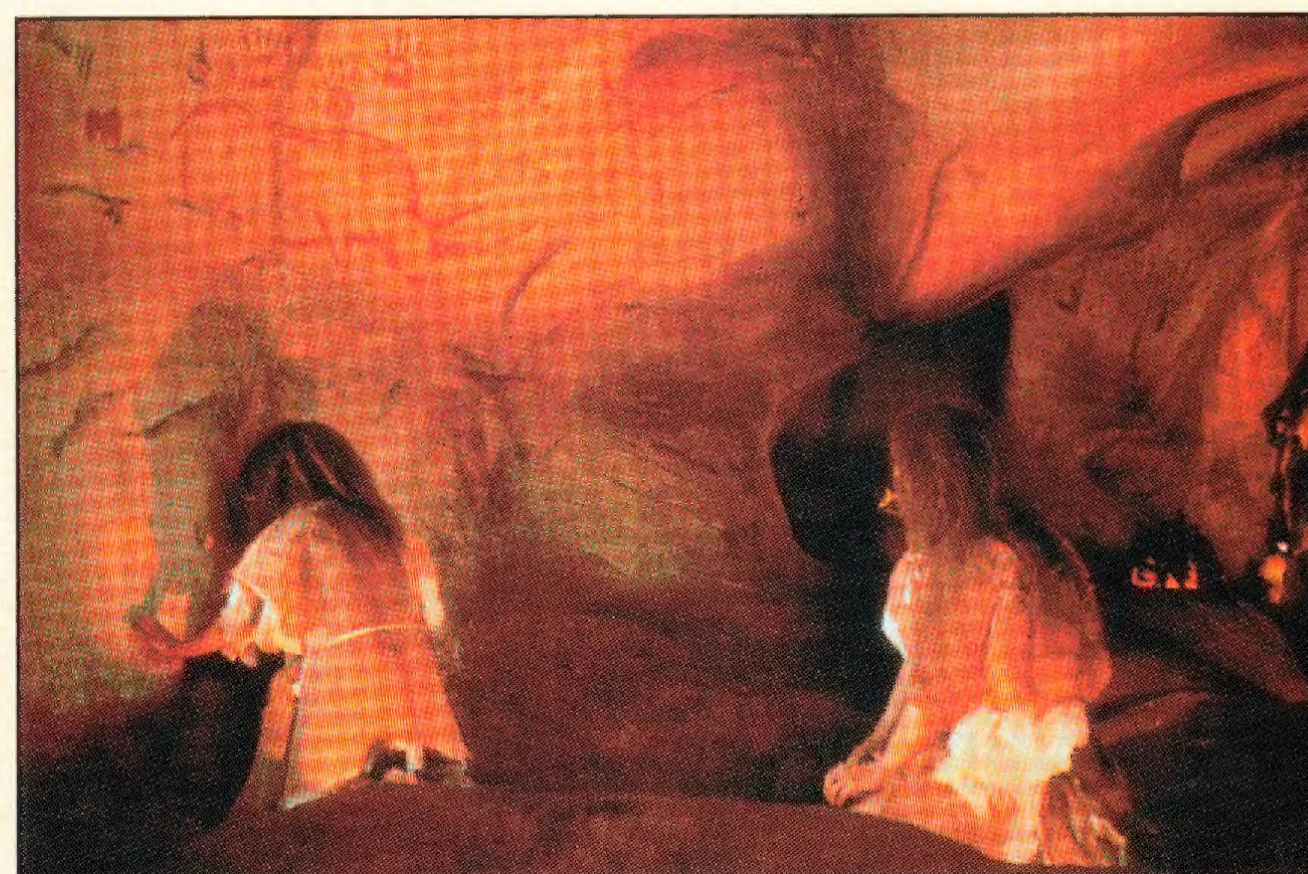
Opens October 9, 1999

This major exhibition displays the vitality, richness, and diversity of cultures and wildlife in Africa. Come experience the grassy fields of Congo, take a caravan trip across the Sahara Desert, and walk the bustling streets of Dakar, Senegal. Survey the major art-producing regions of Cameroon and the metalworking of Benin. More than 150 artifacts and objects such as masks, tools, and textiles help convey Africa's ecology, family life, art, and commerce, from both contemporary and historical perspectives. Special programs will enable you to experience first hand the art, music, dance and stories that have roots from these areas. Made possible by Ford Motor Company and TIME Magazine, the scope and diversity of this exhibit symbolize the Academy's commitment to a greater understanding of the world's people and environment.



May 29 - September 6, 1999

Considered the most comprehensive exhibit on the mysteries of human origins ever created, *Missing Links—Alive!* takes you back through evolutionary time and traces the path that leads to contemporary humans. Fossils and scientific displays are combined with animated recreations of how human ancestors might have looked as far back as four million years ago.



Cro-Magnon figures are depicted making cave paintings.

Missing Links—Alive! was developed in Europe by more than 20 of the world's leading paleontologists and anthropologists, and is based on more than a century of painstaking scientific detective work to solve the puzzle of humanity's existence.

Accompanying the exhibit of some of the first fired clay objects originating in Europe 22,000 to 28,000 years ago. These treasures are on loan from the Moravian Museum Brno in the Czech Republic. The highlight of this collection is the renowned Dolni Vestonice Venus, one of the oldest known ceramic sculptures ever created.

The Academy will also feature a cast of the 3.2 million year old partial skeleton known as Lucy. This cast, one of only two that is mounted in an upright, three-dimensional display, is on loan from the University of California Museum of Paleontology, and is one of the best known human fossils.

Please note that there will be an additional exhibit surcharge for adults who are NOT members of the Academy. All Academy Members and children under 18 may view the exhibition without paying an additional fee. The fee will be \$2.00 for adults, and \$1.00 for seniors. Please call 415-750-7145 or visit our website at www.calacademy.org for more details.

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Academy and UC Santa Cruz Establish Formal Ties

On a beautiful spring afternoon with the University of California at Santa Cruz's Arboretum as the backdrop, heads of the California Academy of Sciences and UCSC committed to joining forces in the interest of biological research and public education.



PHOTO: DONG LIN

UCSC Chancellor M.R.C. Greenwood and Academy Executive Director Patrick Kociolek at UCSC's Arboretum with Academy Fellows.

Academy Executive Director Patrick Kociolek and UCSC Chancellor M.R.C. Greenwood signed a Memorandum of Understanding formalizing ties between the institutions. Among other things, the memorandum will provide a framework for Academy staff to serve on advisory committees for UCSC graduate students and to teach courses at the campus. Faculty of the two institutions will also be encouraged to collaborate in research and education programs. UCSC students—both graduate and undergraduate—will have opportunities for internships in Academy programs in the areas of research, illustration, and journalism.

As she signed the memorandum, Chancellor Greenwood commented, "The California Academy of Sciences has resources and expertise that complement those of UCSC, particularly in areas related to the increasingly important issue of understanding the value of biodiversity." Echoing that collaboration will be fruitful for both institutions, Kociolek said, "The Academy has biologists and systematists whose work dovetails nicely with research at UCSC in biology, chemistry, and marine science and we hope the memorandum will foster cooperative interactions in these areas."

Academy Research Worldwide: Madagascar Display Opens on June 26

Madagascar is the world's fourth largest island, situated about 300 miles off the eastern coast of Africa. Because the island has been isolated from other lands for 90 million years, it is an excellent place to study the evolutionary history of its species and to survey the diversity of life found here. Eighty percent of Madagascar's plant species are unique to the island, and an even higher

percentage of the island's animals are endemic species. Many of these species have yet to be described and studied by science.

A group of the Academy's renowned scientists is devoting its energy, resources, and expertise to survey the biota found on this remarkable island. The Academy will be showcasing this research through a lively interactive kiosk which will be on display beginning June 26.

Through electronic media, graphics, and specimens, you will meet the scientists at work as they journey through the rainforests of Madagascar. Watch as the scientists discover new species and work with Malagassy students, educators, and government agencies on topics such as research methods, species conservation, and importance of biodiversity. You will be with the scientists and Malagassy people as they gain a better understanding of the value of their environment, and the need to protect it.

The Planetarium's Rising Star

If you have recently seen media coverage of the discovery of the new solar system, Upsilon Andromedae, chances are you have also seen the science illustrations of Lynette Cook, artist and photographer for the Morrison Planetarium. Using a mixed media combination of acrylic, gouache, and colored pencil, Lynette creates images that offer a glimpse of the worlds beyond our own solar system. Her illustration of the Upsilon Andromedae System recently accompanied news stories in Newsweek, Astronomy magazine's web site, Yahoo News, and will be published in the United Kingdom and the Netherlands.

An award winning artist, Lynette's works have been exhibited across the country and can currently be seen in group shows at the Florida Museum of Natural History, and the Explora Science Center and Children's Museum of Albuquerque, New Mexico. A collection of her works, *The Artist's Universe II*, is on

display at the Academy of Sciences through October 10, 1999. Visitors to the Academy's Earth and Space Hall may recognize Lynette's contributions to the permanent exhibit—the mural of the Milky Way galaxy and the planets of our own solar system.

With the increase of digitally produced images, many who see Lynette's celestial images may be surprised to learn that all the images on display are created by the hand of an artist. The Academy is very fortunate to have the talent, dedication, and vision of Lynette Cook.



PHOTO: LYNETTE COOK

Seeking Intelligent Life in the Milky Way

The Legacy of Dr. and Mrs. Donald Denning

Dr. and Mrs. Donald Denning were long-time supporters of the Academy. A prominent Bay Area entomologist, Dr. Donald Denning was born in Ely, Minnesota in 1910 and educated at McAllister College in St. Paul. During WWII he was posted to the U.S. Public Health Service, Quarantine Division. In the late 1940s he was with the University of Wyoming in Laramie. Working on the problem of insect



PHOTO: JAMES DENNING COLLECTION

Dr. and Mrs. Denning

infestations in agriculture and animal husbandry, he developed a considerable international scientific reputation. Over the course of his career, he identified many new species of insects. In his later years, Dr. Denning was an economic entomologist for Chemagro Corporation. Dr. Denning donated portions of his large insect collection to Clemson University, the California State Collection

of Arthropods, and the UC-Davis Bohart Museum, and was a life time member of the California Academy of Sciences. A portion of his library was donated to San Jose State University. Dr. Denning passed away in 1988.

Mrs. Loretta H. Denning, continuing her husband's legacy, made many gifts to the Academy. In 1989 she gave the valuable collection of her husband's 28,270 Trichoptera insects (caddisflies) to the Academy Entomology Department. Mrs. Denning created a living trust in 1988, amended in 1992, giving the Academy 90% of the balance of her estate. Because of her estate plans for the Academy, Mrs. Denning was an Eastwood Associate. Following Mrs. Denning's death in 1995, the Donald G. and Loretta H. Denning fund is used to support the activities and projects of the Entomology Department.

The Denning family legacy continues. In 1997, the Dennings' son James donated the Donald G. Denning Library of natural history books, journals, and reports to the California Academy of Sciences.

For information about estate planning, please complete the coupon on page 14.

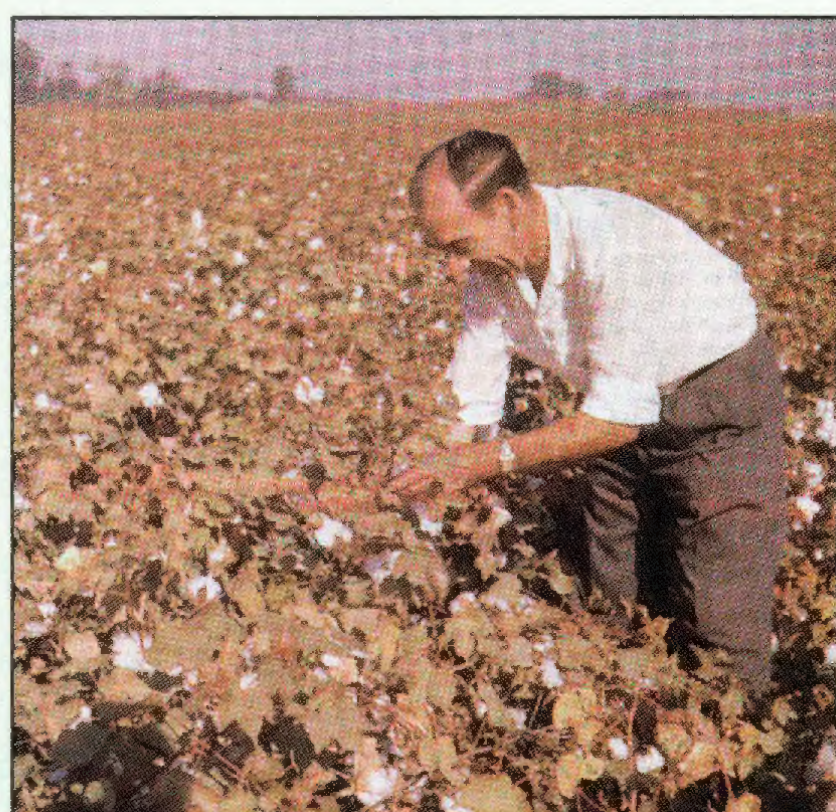


PHOTO: JAMES DENNING COLLECTION

Dr. Denning examining insects in a cotton field.

The Kimball Chair Endowed

The Academy is delighted to announce the award of \$2,500,000 for a new endowment, the William R. and Gretchen B. Kimball Chair. Proceeds from this fund will support the position of the Executive Director of the Academy.

Mr. Kimball has been a tireless supporter of the California Academy of Sciences for many, many years. Serving as Chairman of the Board of the Academy until January 1997, Mr. Kimball is now Chairman Emeritus. He is also a former chair of the Academy Council. He attended Stanford University where he received a degree in Economics. He received an MBA from Harvard University. Mr. Kimball is principal of Kimball & Company, a San Francisco firm that coordinates and manages various business operations, including security investments and real estate income property. He has been on the board of Levi Strauss & Co., Utah International Inc., and many other national corporations. He serves as Co-chair of the Colonial Williamsburg National Council, and has served on the boards of Stanford University (President), California Historical Society, San Francisco Symphony, the Marine Mammal Center (Sausalito), and the Smith-Kettlewell Eye Research Institute (San Francisco).

Throughout the years, the Kimball family has supported the research and educational mission of the Academy. According to Mr. Kimball, this current gift is given, to add to the prestige of the position of Executive Director, to continue to make the Academy comparable to the finest natural history museums in the world, to acknowledge the exemplary leadership of its current director, Dr. Kocielek, and "because I love the institution." It is with heart-felt gratitude that the Academy acknowledges this extraordinary gift.

Eighth Annual Summer Gala

On Saturday, July 10, the Academy will host its Eighth Annual Summer Gala, NeanderBall. Come and enjoy cocktails and hors d'oeuvres by McCall Associates, as well as dancing, entertainment and other surprises not to be matched.

This year's co-chairs are Beau Giannini and Megan Fung. Tickets for this year's event are \$100 for members and \$125 for non-members. For further information, please call Anne Rianda in the Special Events Office at (415) 750-7219. You may also use the order form on page 14 for tickets.



June

Three Fearful Days San Francisco Memoirs of the 1906 Earthquake & Fire

with Malcolm E. Barker, author, reporter

Mr. Barker writes that San Francisco was not the only town devastated by the earthquake on April 18, 1906. Santa Rosa was almost demolished; San Jose and Santa Cruz were severely damaged. The library, gymnasium, and chapel were reduced to ruins at Stanford University.

In his talk/slide presentation, Barker recounts the day before the dramatic earthquake, and continues with many stories from survivors and visitors. His choice of personal reminiscences provides a unique insight into the psychological and sociological effects of one of the nation's most

horrendous natural disasters in the 20th century.

For the past seven years Baker has been researching, writing, and producing the San Francisco Memoirs trilogy, which was completed with the publication of *Three Fearful Days: San Francisco Memoirs of the 1906 Earthquake and Fire*, in July 1998.

Barker was born in London, England, and worked as a newspaper

reporter in Brighton before traveling extensively. He immigrated to San Francisco in 1961 after first visiting the city on his travels, and became a U.S. citizen in 1983.

A book-signing will follow the lecture outside the auditorium. His book may be purchased from the store for \$16.95, less Members' discount.

June 9 (Wednesday) 2 pm & 7:30 pm

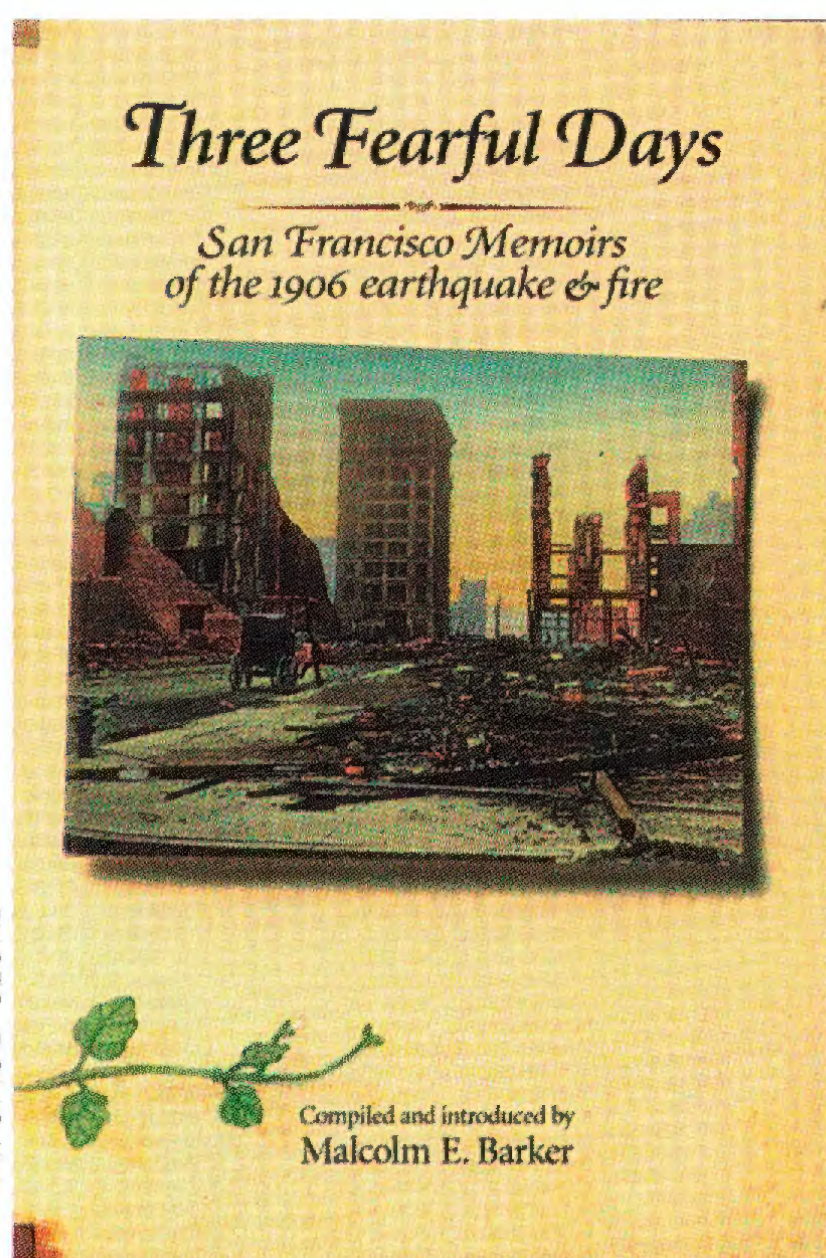


PHOTO: DONG LIN

July

Classical Chinese Gardens

with Nancy Pickford, travel consultant and lecturer

The Chinese garden is intended to be a microcosm of the universe, reflecting humanity's kinship with nature and the Taoist principle of harmony of the elements - Yin and Yang. Studying a classic Chinese garden can be compared to studying a Chinese landscape painting. Shan shui, the Chinese phrase for landscape, literally means mountains and water, major elements of the garden whether an imperial

garden or a scholar's garden. Gardens of the literati were islands of meditation and reflection, contemplative and serene.

Pickford will present a lecture/slide program of some of the Chinese gardens she has visited on her many trips to China. While it may appear seemingly informal and unstructured to us, Pickford relates that the Chinese garden is in fact highly structured and planned in great detail.

July 14 (Wednesday) 2 pm & 7:30 pm



PHOTO: TEMOIE YANZHOU

Note to Members

A new, updated Reciprocal Free Admission Program List will be available at the end of June. Stop by the Membership Booth on your next visit and pick up a copy. The list will no longer be mailed with your membership cards.

Upcoming Members' Lectures:

August 11th – The Skin and Bones of Human Evolution
with CAS Curator of Anthropology Nina Jablonski

September 8th – An Affair with Africa
with Alzada Carlisle Kistner, author, explorer

Many thanks to the following members who have increased their support of the Academy and its Annual Fund in the last two months:

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New and Renewing Donor Circle Members

January and February 1999: \$125 to \$999

Donor Circle membership contributions support the Academy and significantly advance our work in research and education. It is with great pleasure that we gratefully acknowledge these gifts.

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A Discovery Lecture Series

Discover human evolution with Dr. Nina Jablonski, Irvine Curator and California Academy of Sciences Chair of Anthropology. These four lectures introduce the major phases of human evolution as we now understand them from many lines of scientific evidence. The lectures correspond with the four animated dioramas in *Missing Links—Alive!* portions and will be held within the exhibit.

For more details, please call (415) 750-7097 or refer to the 1999 Summer Course catalog.

Discovering Australopithecines

Jablonski discusses the earliest fossil evidence for the human lineage, and the lifestyles of our ancestors who lived over two and a half million years ago. She explores the several early branches of the human family tree and explains why some early humans were successful while others were not.

June 7 (Monday)
7:00 - 9:00 pm

Discovering the Earliest Members of the Genus *Homo*

Learn how the anatomical and technological innovations of the genus *Homo*, made colonization of subtropical and temperate environments possible within the last two million years.

June 14 (Monday)
7:00 - 9:00 pm

Discovering Neanderthals

Looking at every aspect of Neanderthal anatomy and their known material culture, Jablonski recreates a portrait of their complex and interesting lifestyle. Learn about the latest molecular evidence for the Neanderthals' place in human evolution.

June 21 (Monday)
7:00 - 9:00 pm

Discovering Early *Homo sapiens*

Jablonski explores the fossil evidence and diverse adaptations of the earliest representatives of our own species—*Homo sapiens*. In this lecture, she emphasizes the precursors to and the "explosion" of human symbol use that took place approximately 50,000 years ago. During this time, highly complex forms of human expression emerged. Participants survey the beauty and possible meanings of the exquisite carvings of early *Homo sapiens* from the Czech republic, on display in *Missing Links—Alive!*

June 28 (Monday)
7:00 - 9:00 pm

Series of 4 lectures:
\$45 members/\$50 non-members
Individual lectures:
\$12 members/\$14 non-members

Missing Links—Alive! Lecture Series

Presented by the California Academy of Sciences and the L.S.B. Leakey Foundation. These lectures, offered in conjunction with the Academy's visiting exhibition, Missing Links—Alive!, will be held in Morrison Auditorium.

The Hunting Apes: Meat Eating and Human Origins

Craig B. Stanford

Drawing from his recent book, *The Hunting Apes*, anthropologist Craig Stanford integrates his own ground-breaking work on chimpanzee hunting behavior with recent discoveries from the human fossil record and insights into the behavior of traditional foraging people. Stanford argues that the use of meat was the central feature of human evolution, and discusses its role in the explosion in brain size that has occurred in *Homo sapiens* in the past 200,000 years. Stanford links his findings to the development of sex roles and the origins of patriarchy in human societies.

June 16 (Wednesday)
7:00 pm
\$6 members/\$10 non-members
Book signing immediately following the lecture.

Changing Views of Human Evolution

Adrienne Zihlman

Human paleontology is a dynamic area of study in which new and often surprising discoveries challenge our thinking. The fossil record of the human past offers essential clues about the biology and anatomy of our ancestors. However, information from molecular biology, ecology, and geology, and the application of computer technology has at times compelled a re-evaluation of the fossil record. Zihlman describes how new information has shaken and altered ideas about human origins and evolution.

August 5 (Thursday)
7:00 pm
\$6 members/\$10 non-members

2.5 Million Years of Human Evolution

Alan Walker

Walker reviews the evidence that the genus *Homo* arose about two and a half million years ago from an *Australopithecus* ancestor, around the time the first stone tools appeared. Walker describes some of *Homo*'s critical adaptations, and how they differed from those of *Australopithecus*. Find out how the *Homo erectus* skeleton from Nariokotome in Kenya gives a particularly full picture of this type of early hominid.

August 19 (Thursday)
7:00 pm
\$6 members/\$10 non-members

Benjamin Dean Lectures

Family Nights of Storytelling Under the Stars

A special celebration of culturally diverse stories of the stars will be presented in the Morrison Planetarium during the summer months. Instead of the in-depth look at current astronomical research, the usual topic of the Benjamin Dean Lecture Series, storytellers will weave a magical view of the cosmos through stories from many traditions. Join us under the planetarium sky for the special treat designed for Academy families with children of all ages.

On the Moon

by Ruth Stotter



Ruth Stotter

The moon, our nearest neighbor in space, has long inspired wonder. People around the world, viewing the dark and light shadows playing on the features of the moon's surface, have imagined our satellite as inhabited. Maybe you too can see a rabbit, or a frog or maybe a boy with an axe. Others might perceive a woman weaving, a tree or a moon goddess. Storyteller Ruth Stotter will present an

evening of poetry and tales gathered from multicultural mythology about such imagined beings on our Moon.

Ruth Stotter has authored a collection of stories *The Golden Axe* and *About Story: A Collection of Articles about Stories and Storytelling*. A well known storyteller and teacher, Ruth is currently chairman of the Folk Narrative section for the American Folklore Society, a consultant on storytelling with puppets for Puppeteers of America, and former director of the Dominican College Storytelling Certificate Program. Deeply immersing herself in moonlore, Ruth is working on a picture book about the moon.

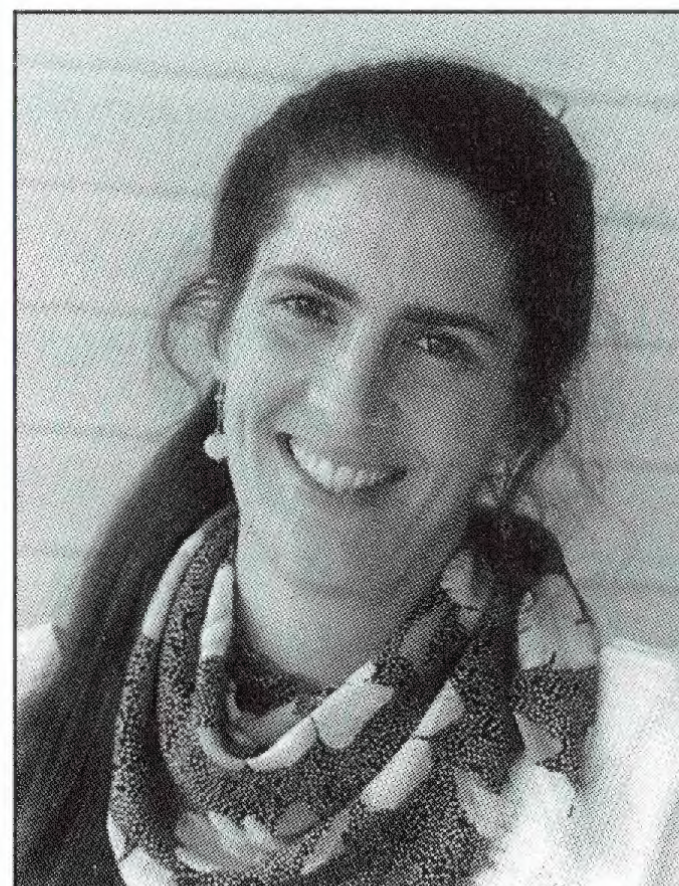
June 29 (Tuesday)

The Story of the Universe

by Mary Ellen Hill

Mary Ellen Hill's stories abound with wondrous visions of the natural world. And what could be more wondrous than the formation of the entire universe?

In her telling of *The Story of the Universe*, Mary Ellen blends contemporary science and ancient mythology. She weaves an educational yet magical tale starting with the initial flaring forth of the Universe some 15 billion years ago, but current understanding of the creation of atoms, stars, galaxies, sun, planets, earth and moon are complemented by indigenous creation myths. After hearing how cosmologists explain



Mary Ellen Hill

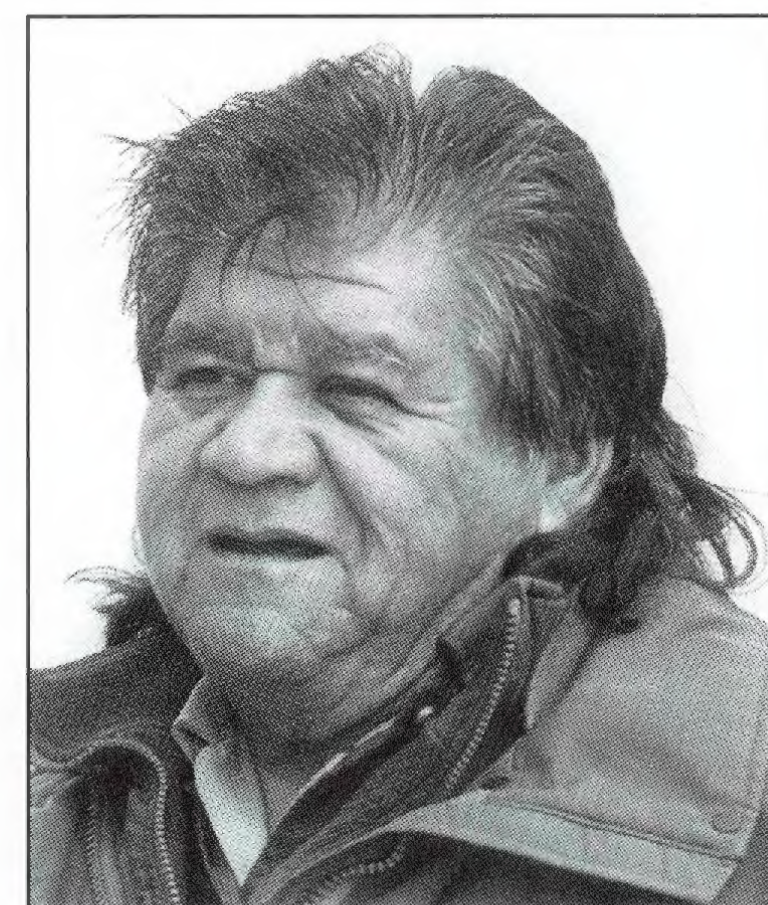
July 6 (Tuesday)

Envisioning the Solar System

by Lanny Pinola

As a park ranger at the Point Reyes National Seashore, Lanny Pinola is comfortable gazing into the wide open expanses of the night time sky. But he is willing to confine his imaginings to the planetarium sky for one evening, to share with Academy families the oral legacy of his ancestors. Lanny is the Community Tribal Elder of the Kashia Pomo/Miwok Tribes in the Western Region north of San Francisco. He is keeping alive the wisdom and insights of those before him through the retelling of their stories and traditions. Lanny will concentrate on visions of the heavens, tales of the planets, sun and moon and the spiritual life of the night for our enlightenment and enjoyment.

August 3 (Tuesday)



Lanny Pinola

Summer 1999 Benjamin Dean Lectures (Storytelling) in the Morrison Planetarium.

Tuesdays at 7:30 pm, \$3.00 each

Information Hotline: (415) 750-7141

On Our Cover

"Lucy" skeleton (*Australopithecus afarensis*)
Photo: Courtesy of The Institute of Human Origins.

Adult Education

How Stars Are Made

Looking up at a clear night sky, we see countless stars. Many are so bright they seem to have been born very recently. Others, more dim, are forming right now. Stahler reviews how a star is formed and the changes a young star will undergo before settling into a relatively quiescent state (similar to our Sun). Appreciating and understanding stars requires only curiosity about how stars are made.

Steven Stahler

June 10, 17, 24 (3 Thursdays)

7:00 – 9:00 pm

\$35 members/\$40 non-members

Birds and Landforms of the Klamath Basin

Weekend Excursion



PHOTO: JOHN H. TASHJIAN

Bald Eagle *Halinaeetus iencoecepholus*

Six wildlife refuges and Lava Beds National Monument are nestled in a dramatic basin along the California–Oregon border. These are important nesting areas for numerous water birds. Mid-June is an especially good time to visit, as many young birds are already out of the nest. From a base at the Rocky Point Resort on Upper Klamath Lake, explore the lake's extensive marshes by canoe, enjoying Black Terns, Ospreys, Bald Eagles, and myriad other birds. Adjacent to this dynamic area are the montane forests of the Cascades, where woodpeckers, warblers, and Gray Jays can be seen. The immense caldera of Crater Lake is one afternoon's destination.

Dave Wimpfheimer

June 18 – 20 (Friday – Sunday)

10:00 am Friday – 2:00 pm Sunday

\$155 members/\$175 non-members

Prices are the same for single and double occupancy. Trip includes accommodations. Does not include transportation or meals.

The Personal Evolution of Charles Robert Darwin, Esq.

Charles Darwin seems such an unlikely candidate for a scientific revolutionary—undistinguished student and comfortable country squire, devoted family man, shy hypochondriac. John Dillon examines recent research on Charles Darwin's life—his childhood and education, his global exploration and reclusive adulthood, his immense workload and debilitating illness—with an eye to the social and intellectual contexts in which he evolved as a scientist.

John Dillon

June 22 (Tuesday)

7:00 – 9:00 pm

\$10 members/\$15 non-members

Three Women of Science: Dian Fossey, Birute Galdikas, and Jane Goodall

Louis Leakey's "three angels," revolutionized primate study and marked a major change in the role of women in field research. This course tells the stories of these three remarkable women, including how each became one of Leakey's protégés and how each has made groundbreaking observations of wild primate behavior. Learn about their lifelong dedication to the research of great apes conducted in the diverse habitats of the Virunga Mountains of Rwanda, Gombe Stream of Tanzania, and the flooded forests of Borneo.

Karla Wesley

July 8 (Thursday)

7:00 – 9:00 pm

\$10 members/\$15 non-members

Mammals From the Inside Out

Lecture and Field Trip

To accurately draw mammals, one needs to understand the masses of muscles beneath their skin. To draw muscles, an understanding of underlying skeletal structure is required. In this class, examine the basic structural anatomy that artists and biologists wishing to make rapid and accurate drawings or field sketches need to know. Visit the San Francisco Zoo to learn more details of mammal anatomy, and to apply these new skills while drawing live animals.

Jack Laws

Class: July 27 (Tuesday)

7:00 – 9:00 pm

Field Trip: July 31 (Saturday)

10:00 am – 4:00 pm

\$40 members/\$45 non-members

Traditional Arts of the World

All programs take place at 1 pm in the Morrison Auditorium on select Saturdays. Presentations are free after general admission to the museum. For further information on these events and other Traditional Arts Programs, contact June Anderson at (415) 750-7164. The Traditional Arts Program is funded by the Paul L. and Phyllis Wattis Foundation.

June

June 5 — Latin American Storytelling



Olga Loya

Accompanied by a hand-drum, storyteller Olga Loya will relate the Aztec myth of La Diosa Hambrienta (the Hungry Goddess) and the legend of La Llorona, among other family stories from Mexico and Latin America.

June 12 — Islamic Celebration

The Intercultural Alliance of Islamic Art and Education presents a medley of music, dance and costumes from the Middle East, including Iran, Pakistan and Afghanistan.

June 12 and June 13 — Special program — Hawaiian Music and Dance

Moana Dudoit and her Hula Halau from Moloka'i visit San Francisco for an exclusive presentation. The program includes classical *kabiko hula* and modern *'auwana hula*, as well as Moloka'i's own *hula ku'i style*, to the accompaniment of chants (*meles*) and live music on indigenous instruments.

June 12, 2:15 pm; June 13, 1:00 pm



Moana Dudoit

June 19 — Basque Dance

The *Zazpiak Bat* Basque dance group will present a program of folk dance and live music from *Euskal Herria*, the Basque Country. Among the dances featured are the *Uztai Txiki*, from the province of Guipuzkoa, the *Matelota* from the province of Lapurdi, *Euskaldunak* from the province of Navarre and the *Baso Dantza*. All dances will be accompanied by music on the accordion and *Txistu* (a flutelike instrument dating back to prehistoric days).

July

July 17 — Screening:

Red Alexander Shipwright and Folk Artist

Directed by Ms. Chris Simon and produced by Dr. Archie Green, this 30-minute-long film portrays Robert "Red" Alexander and his lifelong passion for ship building. The artist, director and producer will be present at the screening.

July 24 — Folk Usage of Bay Area Plants

Herbalist Catherine Abby Rich will discuss the medicinal and therapeutic uses of California native plants and will bring samples.

July 31 — Peruvian Folk Costumes and Dance

In celebration of Peru's Independence Day (July 28), Kanchis Dance Ensemble will model Peruvian folk costumes from these coastal and Andean regions. The company will end the program with the magnificent dance Kanchis.

Public Programs

Musical Conversations at the Academy

The Academy is delighted to be partnering up with the Stern Grove Festival once again! The Stern Grove Festival is committed to increasing accessibility to world-class performing arts by presenting ten free exciting and diverse concerts each summer. The Academy collaborates with the Festival by hosting two special interactive presentations. Artists utilize the intimate Academy setting to talk about their art and interact with the audience as they perform. Performances are free for all to enjoy and are geared for family audiences. This year, there will be two performances each Free Wednesday in July and August.

The West African Highlife Band

July 7 (Wednesday)
11:30 am and 1:30 pm (Auditorium)

Tales of the Ashanti

with Jim Gamble Puppet Productions

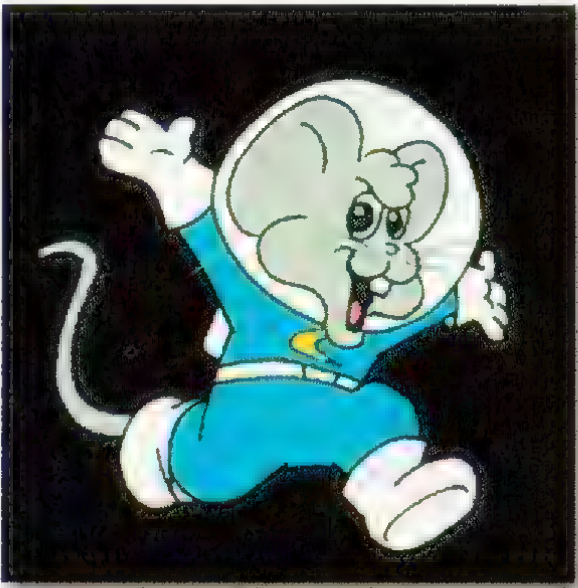
Two African folk tales are played out with life-sized puppets and stage settings which were inspired by the characteristic artwork of the famed Ashanti tribe of West Africa.

August 4 (Wednesday)
11:30 am and 1:30 pm (Auditorium)

Morrison Planetarium recently celebrated its 46th year of putting stars in the eyes of San Franciscans. We are the only major planetarium in North America to use a star projector constructed in-house. Read the story of "The Academy Projector" on our website at:

www.calacademy.org/planetarium. There you can also download *What's a Planetarium?* a coloring book for children.

When it was being built, Morrison Planetarium received \$10,000 from the school children of San Francisco. Ever since, we have always welcomed children to our Sky Shows. If you know a budding astronomer, the summer is a great time to bring him or her to see *Neighbors in Space* which runs at 11 am every day from July 1 through September 6.



Sky Shows

Been a while since you've seen a Planetarium show? The summer is a great time to use your Member's Sky Show Passes! From July 1 to September 6, we offer several shows daily.

The Other Side of the Sky
ending date: 9/12

How do the Hubble Space Telescope, and giant radio dishes and raindrops help us uncover the wonders of modern astronomy? Noted Bay Area astronomers describe in their own words what excites them about their work and how they try to unlock the secrets of the universe.

Stardust
ending date: 6/13

Take a closer look at some of the minor bodies orbiting our star—from particles of dust to rocky asteroids and icy comets—and find out how some of the solar system's smallest members can have the greatest impact on us.

Tales of the Twilight
ending date: 12/5

Why are certain constellations considered more important than others? What's the mythology behind these star patterns? What star-stories are told in different parts of the world? Explore the workings of the sky and the way various cultures viewed the heavens down through the ages.

Neighbors in Space
no ending date

In this family show, the cosmic cartoon critter Moon Mouse leads an exploration of the Sun, Moon, and the planets of the solar system. *Neighbors in Space* is offered in the morning for the convenience of members with younger children.

The Sky Tonight
no ending date

A relaxing tour of the current night sky, focusing on constellations, visible planets, the phase of the Moon, and upcoming celestial events visible with the naked eye. This is our most free-form show, where the sky is the main effect; style may vary from one lecturer to another.

June – July Sky Show Schedule

Sky Show	Weekdays	Weekends
June 1-13, 1999		
The Other Side of the Sky	2pm	12 & 2pm
Stardust		1 & 4pm
The Sky Tonight		3pm
Neighbors in Space		11am
June 14-17, 1999		
<i>Planetarium is closed</i>		
June 18-30, 1999		
Tales of the Twilight	2pm	12 & 2pm
The Other Side of the Sky		1 & 4pm
The Sky Tonight		3pm
Neighbors in Space		11am
July, 1999		
<i>Weekend schedule applies July 5th - Independence Day observed.</i>		
Tales of the Twilight	2pm	12 & 2pm
The Other Side of the Sky	12:30pm	1 & 4pm
The Sky Tonight	3:30pm	3pm
Neighbors in Space	11am	11am
Members, please exchange your Planetarium passes for a ticket at the Planetarium Box Office before the show. If you have a child under 6 years old with you, please ask the cashier for a "Child's Pass". For recorded information about Sky Shows, Laserium, and Night Sky Information, please call 750-7141. To reach the Planetarium Office, please call 750-7127 during business hours. All Sky Shows are between 35 and 45 minutes long. Theater doors open 15 minutes before the show begins.		

Concert

We welcome Bay Area recording artist, Kevin Keller, for his second concert under the stars. In celebration of the summer solstice, Kevin will play his music, described as a blend of electronic wizardry with turn-of-the-century Impressionism. Kevin's work is featured in the Planetarium Sky Shows, *Stardust* and *The Other Side of the Sky*, as well as in *The Artist's Universe* exhibit.

June 20 (Sunday), 8:00 pm
\$10.00 General/\$8.00 Academy Members, Seniors and Students

This Summer Let Your Kids Hang Around With Pond Scum.

Or snakes. Or butterflies. Or just a bunch of little urchins. Camp Academy is offering five hands-on, interactive science programs for children ages 6-16. Your kids can go behind the scenes at Steinhart Aquarium, do field studies in Golden Gate Park, explore Pepperwood Nature Preserve in Sonoma County, investigate marine life at the beaches and mudflats of Bodega Bay or go backpacking among the soaring granite peaks of the Sierra Nevada. Just don't be surprised if words like *Blepharisma* and *Paramecium* start creeping into their vocabulary. It's what you have to expect, considering the company they'll be keeping.

To check on program availability, call 415/750-7100.



PHOTO: DONG LIN

Hiking to Turtle Pond at Pepperwood.

Outstanding Volunteers



PHOTO: DONG LIN

Helen Heller (left) and Rachael Bertone

Meet Rachael Bertone, outgoing Chairman of the Academy's Docent Council, and Helen Heller, who assumes that position this month. "Outgoing" is just one of several adjectives which can be used to describe Rachael - try dynamic, energetic, creative - to name just a few of her attributes. She describes her two-year tenure as project-oriented, citing the implementation of the Docent Council's Long Range Plan by setting up new committees to accomplish many of the Plan's goals as examples.

Rachael says her greatest pleasure has been her close association with other docents who are, in her words, "...the smartest, wittiest, nicest people I know." She admits she is looking forward to having time to resume her volunteer activities with the several other organizations in which she participates, but she will also continue as a touring docent and an ex-officio member of the Docent Advisory Committee, assisting her successor, Helen Heller.

A docent since 1984, Helen is qualified to lead tours in all of the Academy's exhibit halls. She has recently played a major role in the development and facilitation of the Council's Adult and Family Highlight Tours, offered to our visitors at no additional charge after Academy admission. Helen expects to continue accomplishing the goals of the Docent Plan and the initiatives of the Academy's Education Department; and to seek new and creative projects for herself and her committee.

To each of them we extend warm thanks, both for jobs well done and for the prospect of a bright and productive future for the Docent Council. You can be a part of that future by giving consideration to becoming a docent yourself. The next course, on the subject of Diversity of Life (Biodiversity), will begin this fall. For information and dates, please call 415/750-7154.

Order Form

YOUR NAME: _____

Address _____

City _____ State _____ Zip _____

Member # _____

ADULT & FAMILY EDUCATION	Quantity/Members	Qty/Non-members	Total
How Stars Are Made	____ X\$35	____ X\$40	= _____
Birds & Landforms of the Klamath Basin	____ X\$155	____ X\$175	= _____
June 18-20			
Personal Evolution of Charles Darwin	____ X\$10	____ X\$15	= _____
June 22			
Three Women of Science	____ X\$10	____ X\$15	= _____
July 8			
Mammals From the Inside Out	____ X\$40	____ X\$45	= _____
Class: July 27/Field Trip: July 31			
Tennessee Valley at Dusk	____ X\$20 adults	____ X\$25 adults	= _____
July 31	____ X\$15 children	____ X\$20 children	= _____

LECTURES	Quantity/Members	Qty/Non-members	Total
A Discovery Lecture Series			
Australopithecines	____ X\$12	____ X\$14	= _____
Earliest members of Genus <i>Homo</i>	____ X\$12	____ X\$14	= _____
Neanderthals	____ X\$12	____ X\$14	= _____
Early <i>Homo sapiens</i>	____ X\$12	____ X\$14	= _____
Series/four lectures	____ X\$45	____ X\$50	= _____
Missing Links Alive! Series			
The Hunting Apes	____ X\$6	____ X\$10	= _____
Changing Views of Human Evolution	____ X\$6	____ X\$10	= _____
2.5 Million Years of Human Evolution	____ X\$6	____ X\$10	= _____

B. DEAN LECTURES (storytelling)	Quantity	Total
On The Moon	____ X\$3	= _____
The Story of the Universe	____ X\$3	= _____
Envisioning The Solar System	____ X\$3	= _____

JUNIOR ACADEMY

Please call (415) 750-7100 for class catalog.

ACADEMY SUMMER GALA NEANDERBALL

Individual Tickets _____ X\$100 _____ X\$125 = _____

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- ☐ I would like to support the Academy of Sciences with a donation. \$ _____
- ☐ Please send me information about effective gift and personal planning in 1999.
- ☐ Please send me information about life income gifts and bequests to the Academy
- ☐ I have already provided for the Academy in my will or other estate plans.

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\$60 Family or Grandparent

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Address _____ City _____

State _____ Zip _____ Phone() _____

Payment enclosed: _____

TOTAL PAYMENT ENCLOSED \$ _____ ☐ Check (made payable to CAS)

☐ Visa ☐ Mastercard ☐ American Express (\$10 minimum on credit card orders)

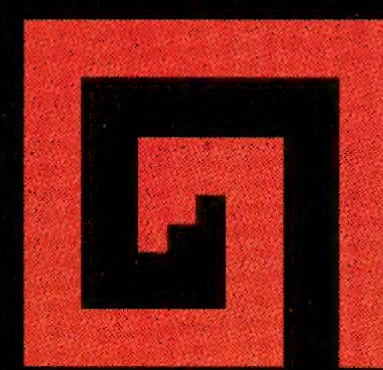
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 **The Elkus Collection**
Changing Traditions in Native American Art



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Academy Symposium on the Earliest Human Colonizations of the New World

On Saturday October 2nd, the Academy will sponsor its Fourth Wattis Symposium in Anthropology on the topic of "The First Americans: Pleistocene Colonization of the New World." In recent years, much new evidence has come to light concerning the peopling of the New World. This evidence not only comes from "traditional" lines of inquiry into human bones and tools, but new evidence marshaled from linguistics, paleoecology and molecular biology. Symposium speakers will address several important questions, including the environmental context of human migrations, the methods by which humans may have reached the New World, and the nature of the peoples who made the earliest moves into the Americas. Several renowned scientists, including archeologists Drs. Anna Roosevelt and Dennis Stanford, linguist Dr. Johanna Nichols, and paleoecologist Dr. Scott Elias, will be participating. A symposium registration form will be published in the next newsletter.

Family Activities

Tennessee Valley at Dusk

Field Trip

Many animals are most active at sunset. Using a bat radar detector, help search for bats, as well as owls, hawks, and



Bobcat *Felis rufus*

bobcats. After learning a few simple hoots, try to converse with several Great Horned Owls who live near the creek.

Walking past the creek into the open meadow, catch a glimpse of a bobcat "mousing," raising high on its hind legs and plunging its nose and front paws down into the grass in search of an evening snack. As our senses adjust to the evening twilight, many other sights and sounds will become apparent, giving us an opportunity to hone our nighttime observational skills. Open to children eight years and older.

Chris Giorni

July 31 (Saturday)

6:00 pm - 9:00 pm

\$20 adults/\$15 children, members

\$25 adults/\$20 children, non-members

The Other Africa: A Tenting Safari in Kenya and Tanzania

December 19, 1999 - January 3, 2000
with Bob and Gail Drewes

Spend the holiday season with Bob and Gail Drewes, curly-crested helmet shrikes, giant forest hogs and the advent of a new millennium. See 400,000 wildebeest on a safari of a bygone era, Hemingway-style where the gracious camp staff attend to all your needs.



Ngorongoro Crater, Tanzania

Alternate between remote lodges and exclusive tented camps miles away from other travelers, in Kenya's forgotten Meru National Park, in Tanzania's Lake Manyara National park, Ngorongoro Crater and Serengeti National Park during the Great Migration. Travel by chartered plane and in comfortable Landcruisers with a window seat and a game-viewing roof hatch for every traveler. This trip, exclusive to the Academy, offers a better wildlife experience than most safaris by positioning the tents away from tourist concentrations and close to wildlife. This is a land of great beauty, where landscapes are spectacular and the diversity of animal and plant life abounds. An East African safari is a must for any avid traveler, and this is the best possible safari.

Cost: \$8,345 per person (based on double occupancy) + airfare

For further information please call the Academy Travel Office at (650) 328-9372 or (800) 853-9372.



Samburu Dancing

June

5 Saturday

Latin American Storytelling
1 pm (Trad. Arts, p. 11)

7 Monday

Discovering Australopithecines
7-9 pm (p. 8)

9 Wednesday

Members Lecture Three Fearful Days
2 pm & 7:30 pm (p. 6)

10 Thursday

How Stars Are Made
7-9 pm (Adult Ed., p. 10)

12 Saturday

Islamic Celebration
1 pm (Trad. Arts, p. 11)

Hawaiian Music and Dance
2:15 (Trad. Arts, p. 11)

13 Sunday

Hawaiian Music and Dance
1 pm (Trad. Arts, p. 11)

14 Monday

Discovering...the Genus Homo
7-9 pm (p. 8)

16 Wednesday

The Hunting Apes
7 pm (p. 8)

17 Thursday

How Stars Are Made
7-9 pm (Adult Ed., p. 10)

18 Friday

Birds and Landforms
Weekend excursion
10 am (Adult Ed., p. 10)

19 Saturday

Basque Dance
1 pm (Trad. Arts, p. 11)

20 Sunday

Planetarium Concert
8 pm (p. 12)

21 Monday

Discovering Neanderthals
7-9 pm (p. 8)

22 Tuesday

Personal Evolution of Charles Robert Darwin, Esq.
7-9 pm (Adult Ed., p. 10)

24 Thursday

How Stars Are Made
7-9 pm (Adult Ed., p. 10)

27 Tuesday

Mammals...Inside Out
7-9 pm (Adult Ed., p. 10)

28 Monday

Discovering Early Homo sapiens
7-9 pm (p. 8)

29 Tuesday

On the Moon
7:30 pm (B. Dean, p. 9)

July

6 Tuesday

Envisioning the Solar System
7:30 pm (B. Dean, p. 9)

7 Wednesday

Musical Conversations at the Academy — The West African Highlife Band
11:30 am and 1:30 pm (p. 11)

8 Thursday

Three Women of Science
7-9 pm (Adult Ed., p. 10)

14 Wednesday

Members Lecture Classical Chinese Gardens
2 pm & 7:30 pm (p. 6)

17 Saturday

Film Screening
1 pm (Trad. Arts, p. 11)

24 Saturday

Folk Usage of Bay Area Plants
1 pm (Trad. Arts, p. 11)

27 Tuesday

Mammals from the Inside Out
7-9 pm (Adult Ed., p. 10)

31 Saturday

Mammals from the Inside Out Field Trip
10am-4 pm (Adult Ed., p. 10)

Tennessee Valley at Dusk Field Trip
6-9 pm (Family Ed., p. 15)

Peruvian Folk Costumes and Dance
1 pm (Trad. Arts, p. 11)

VISITOR INFORMATION

Special Exhibitions:

The Elkus Collection
ongoing
Missing Links—Alive!
through September 6

EARTHQUAKE
permanent exhibit

The Artist's Universe II
through October 10

Witness
ongoing

Feeding Times:
Fish Roundabout, 1:30 pm
Penguins, 11:30 am & 4 pm

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